

ONTARIO MINISTRY OF ENVIRONMENT



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OPERATING SUMMARY

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1973
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POINT EDWARD

WATER POLLUTION CONTROL PLANT

LIBRARY COPY

MAR 13 1975

MINISTRY OF THE
ENVIRONMENT

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1973

Point Edward : water pollution
control plant.

81832



Ontario

MINISTRY OF THE ENVIRONMENT

MINISTER
Honourable William G. Newman

DEPUTY MINISTER
E. Biggs

ASSISTANT DEPUTY MINISTER
REGIONAL OPERATIONS
J. Barr

REGIONAL OPERATIONS DIVISION

DIRECTOR, SOUTHWESTERN REGION
D. McTavish

MANAGER, UTILITY OPERATIONS
A. Ladbrooke

POINT EDWARD
WATER POLLUTION CONTROL PLANT

operated for

THE VILLAGE OF POINT EDWARD

by the

MINISTRY OF THE ENVIRONMENT

1973 ANNUAL OPERATING SUMMARY

prepared by
Plant Performance Unit
TECHNICAL SERVICES BRANCH
T. Cross, Director



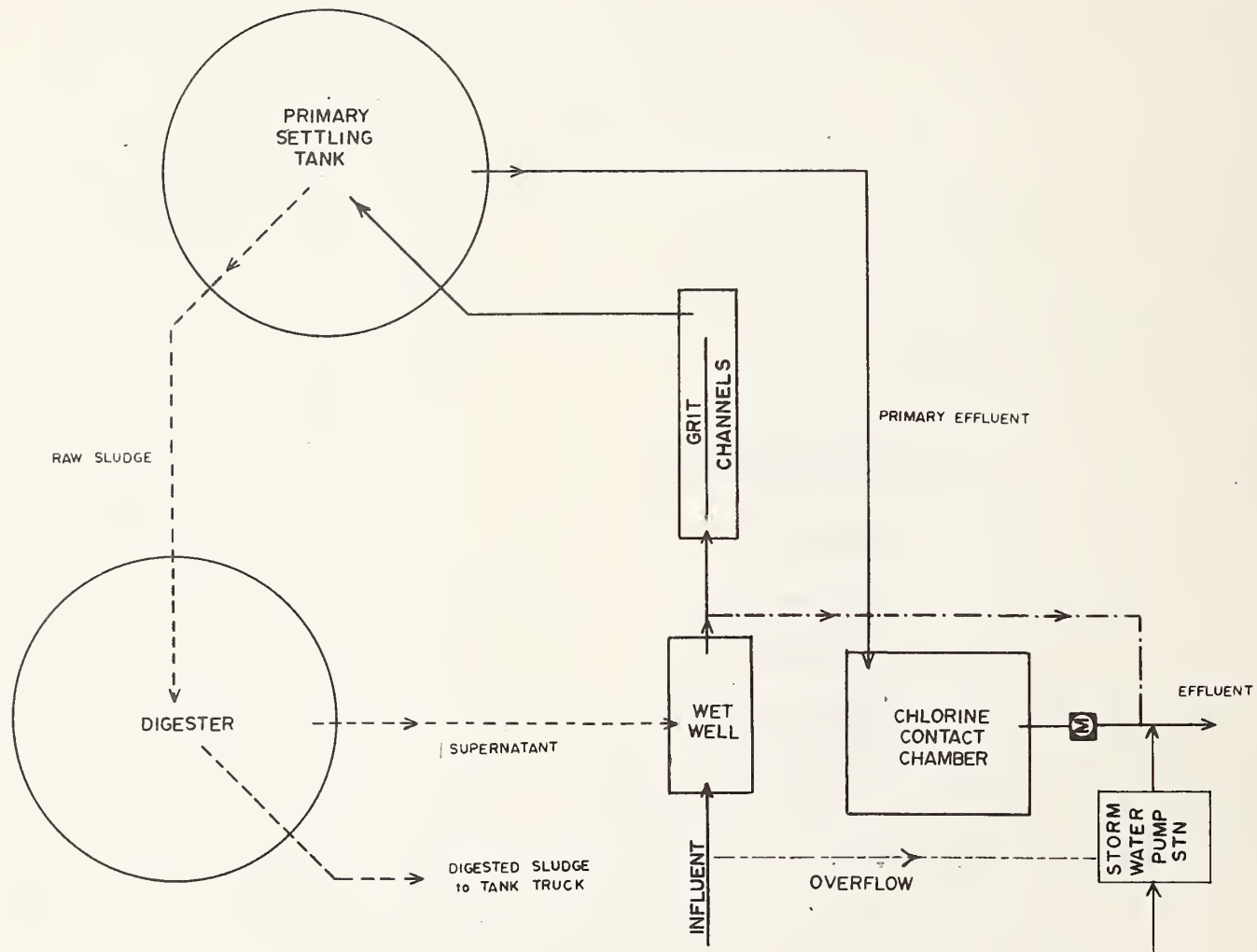
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VILLAGE OF POINT EDWARD WPCP



DESIGN DATA

PROJECT Village of Point Edward
WPCP

PROJECT NO. 2-0036-59

TREATMENT Primary

DESIGN FLOW 0.57 mgd

DESIGN POPULATION 5,700

BOD - Raw Sewage 170 mg/l
- Removal 47%

SS - Raw Sewage 200 mg/l
- Removal 60%

RAW SEWAGE PUMPS

Type: Fairbanks-Morse
Size: Two 1300 Igpm @ 35' tdh

PRIMARY TREATMENT

Screening

Type: Bar screens, manually cleaned
Size: Two; 1 $\frac{1}{4}$ " spacing

Grit Removal

Type: Channels
Size: Two 16 X 1.75 X 2'
Retention: 0.88 min

Primary Sedimentation

Type: Dorr
Size: One 35' dia x 10' swd
(60,000 Imp. gal)
Retention: 2.53 hr
Loading: Surface, 594 Imp. gal/ft²/day
Weir, 5,190 Imp. gal/ft/day

CHLORINATION

Type: BIF
Size: One 200 lb/day
Chlorine Contact Chamber

Size: One 20 X 10 X 8 $\frac{1}{2}$ ' (10,600 gal)
Retention: 27 min

OUTFALL

- to St. Clair River

SLUDGE HANDLING

Digestion System - Single-stage

Type: Dorr; 2 draft tube mixers
Size: One 35' dia x 20' swd (19,200
cu ft or 119,808 gal)
Loading: 1.07 lb/cu ft/mo

PUMPING STATIONS

Storm Water

Type: Custom Built
Size: One 4700 gpm @ 20' tdh
Two 10000 gpm @ 20' tdh
with two 100 hp diesel standbys

Helena Street

Type: Smith & Loveless
package lift station
Size: Two 750 gpm @ 40' tdh

Michigan Avenue

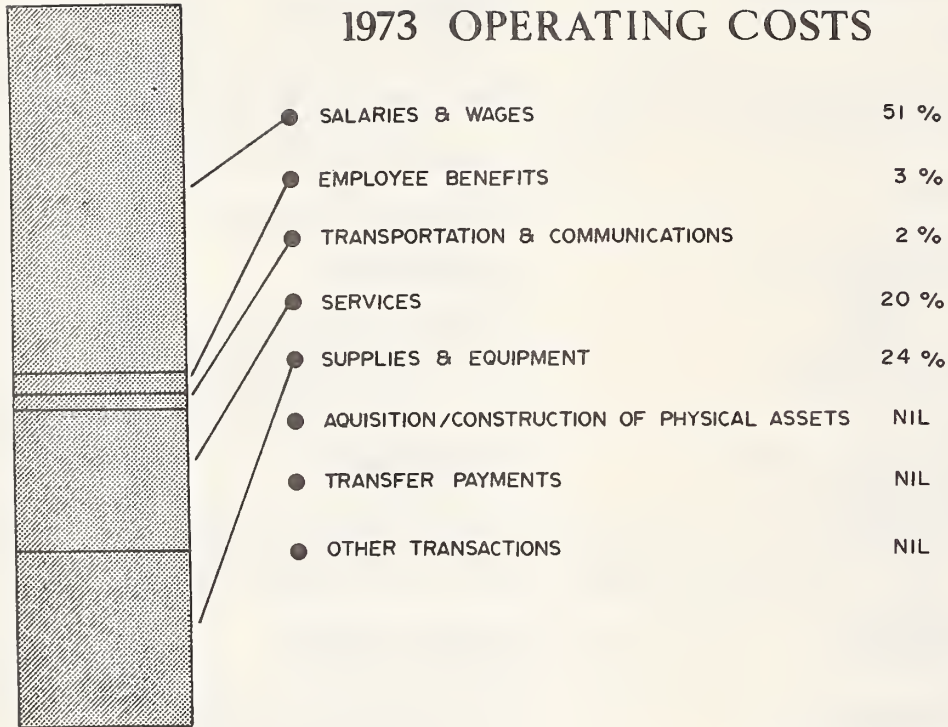
Type: Smith & Loveless
package lift station
Size: Two 500 gpm @ 20' tdh

402 Station (2-0183-65)

Type: Smith & Loveless
Package Lift Station
Size: Two 175 gpm @ 23' tdh

ANNUAL COSTS

1973 OPERATING COSTS



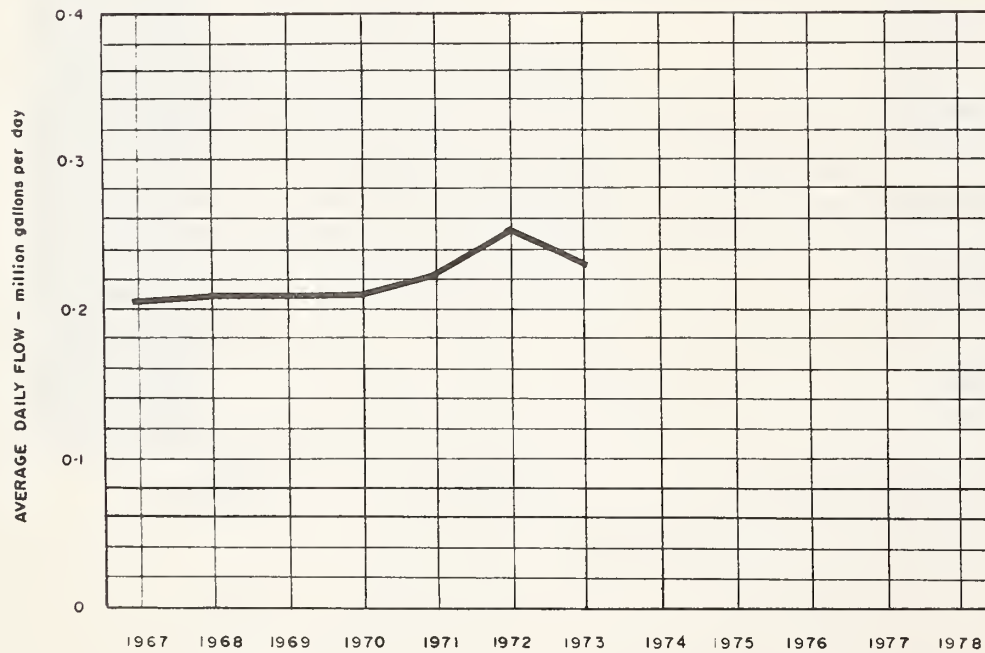
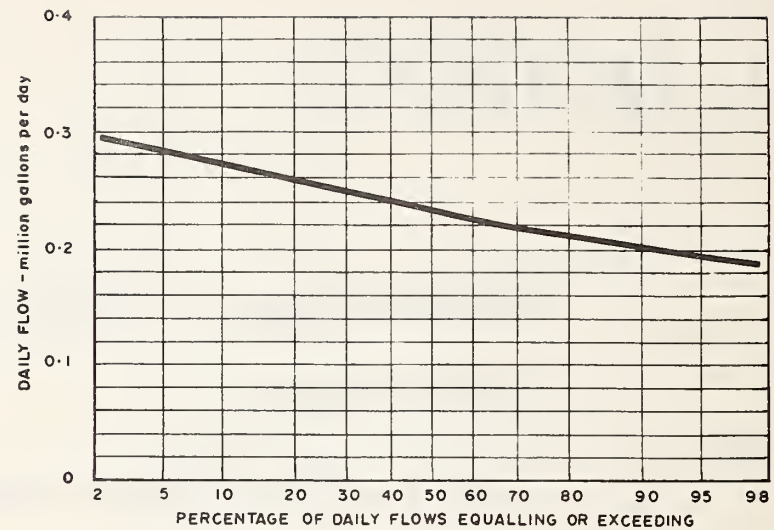
YEARLY OPERATING COSTS

YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M.G.	¢/lb BOD
1968	76.0	\$ 16,299	215	29
1969	77.8	17,290	222	35
1970	77.6	21,161	273	39
1971	83.5	20,494	246	52
1972	91.2	21,734	233	46
1973	84.3	25,871	307	24

OPERATING EXPENDITURES

SALARIES AND WAGES	<u>\$13,177</u>
EMPLOYEE BENEFITS	<u>711</u>
TRANSPORTATION & COMMUNICATIONS	<u>439</u>
SERVICES	<u>5,275</u>
SUPPLIES AND EQUIPMENT	<u>6,269</u>
ACQUISITION/CONSTRUCTION OF PHYSICAL ASSETS	<u>0</u>
TRANSFER PAYMENTS	<u>.0</u>
OTHER TRANSACTIONS	<u>0</u>
TOTAL	<u>\$25,871</u>

PROCESS DATA FLOWS

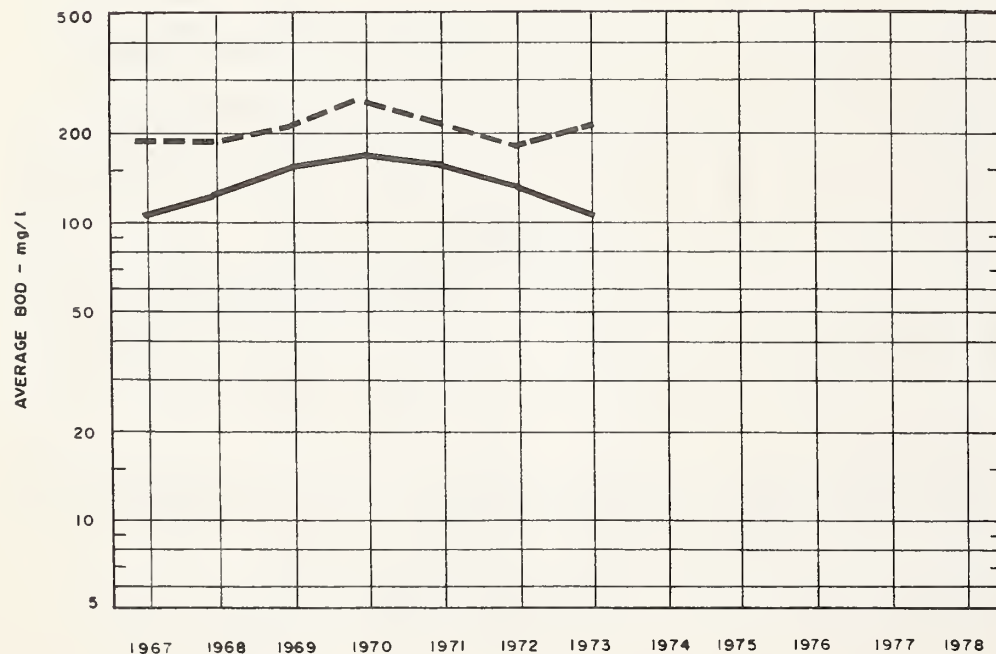
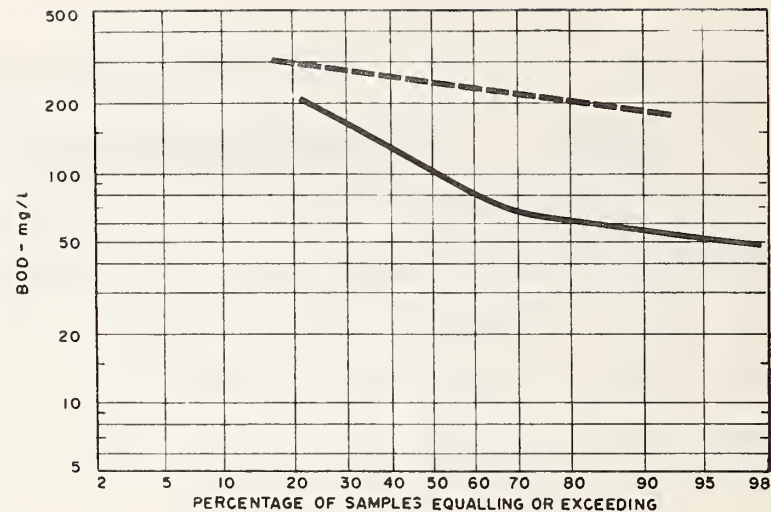


DESIGN CAPACITY 0.57 MGD

PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW million gallons	AVERAGE DAY mil. gal	MAXIMUM DAY mgd	INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l P	EFFLUENT mg/l P
						%	10 ³ pounds			%	10 ³ pounds		
JAN	6.61	0.21	0.27	220				230	30	87	13.2	14.0	1.8
FEB	5.66	0.20	0.23	300	220	27	4.5	500	180	64	18.1	22.0	12.0
MAR	7.96	0.26	0.33	300	100	67	15.9	700	90	87	48.5	28.0	6.0
APR	7.34	0.24	0.28	220	200	9	1.4	200	250			6.5	0.2
MAY	6.85	0.22	0.25	180	78	57	6.9	190	30	84	11.0	10.0	2.6
JUNE	7.10	0.24	0.26	280	70	75	14.9	400	90	78	22.0	25.0	7.5
JULY	7.56	0.24	0.29	220	60	72	9.2	300	50	83	14.4	15.0	1.9
AUG	7.63	0.25	0.41										
SEPT	6.91	0.23	0.40	170	65	62	7.2	230	460			11.0	1.1
OCT	6.45	0.21	0.33	220	75	66	9.3	190	20	89	11.0	9.8	2.3
NOV	6.82	0.23	0.31	200	55	72	9.9	320	20	93	20.5	12.0	1.5
DEC	7.44	0.24	0.35										
TOTAL	84.33	-	-	-	-	-		-	-	-		-	-
AVG.		0.23	MAXIMUM 0.41	211	103	51	8.8	326	122	63	19.8	15.0	3.7
No. of Samples	-	-	-	10	9	-	-	10	10	-	-	10	10

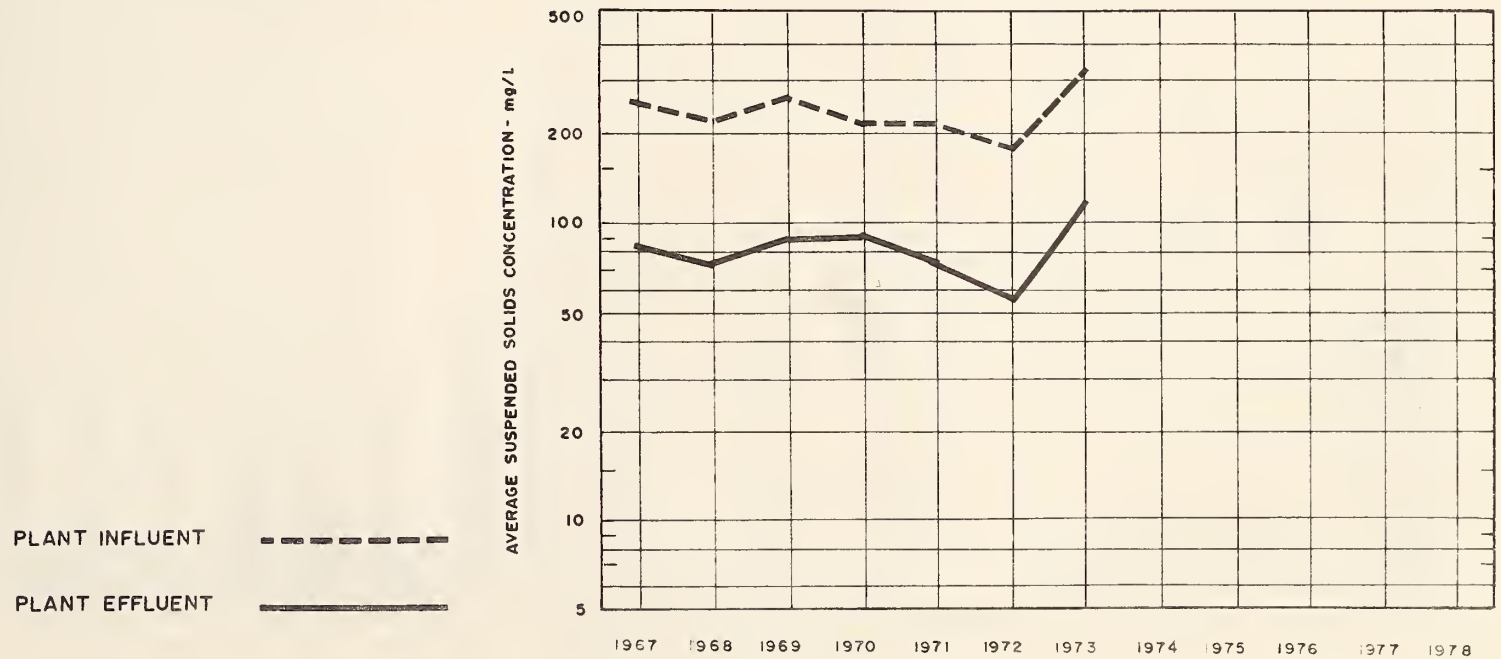
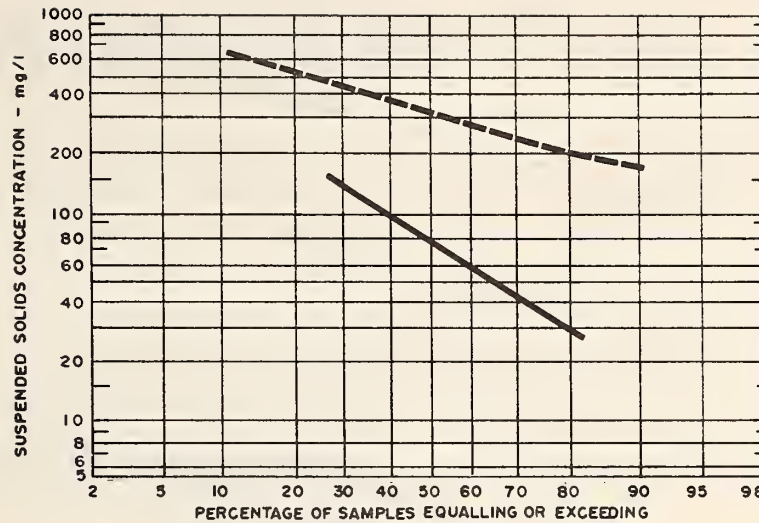
BIOCHEMICAL OXYGEN DEMAND



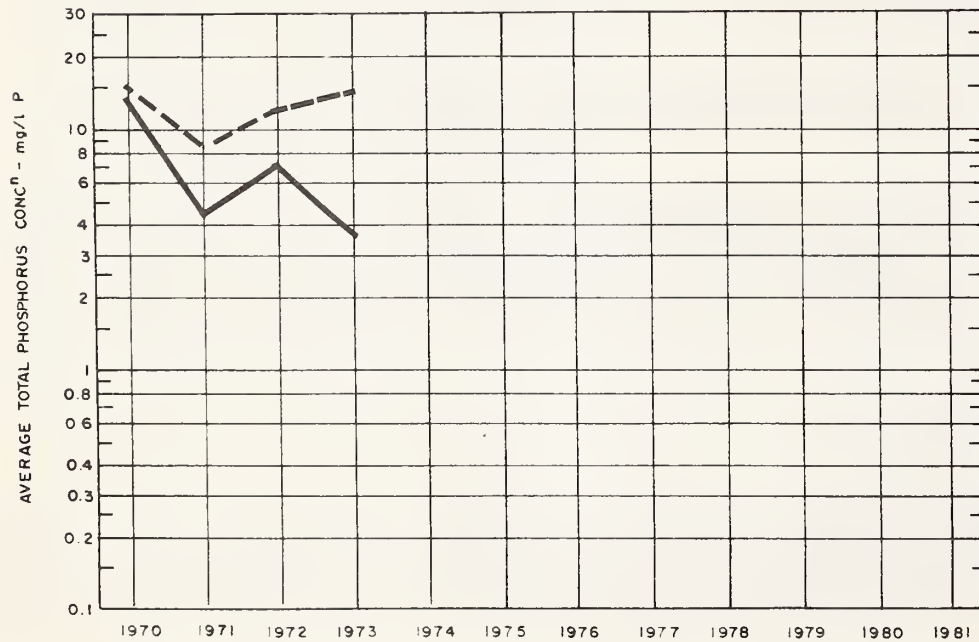
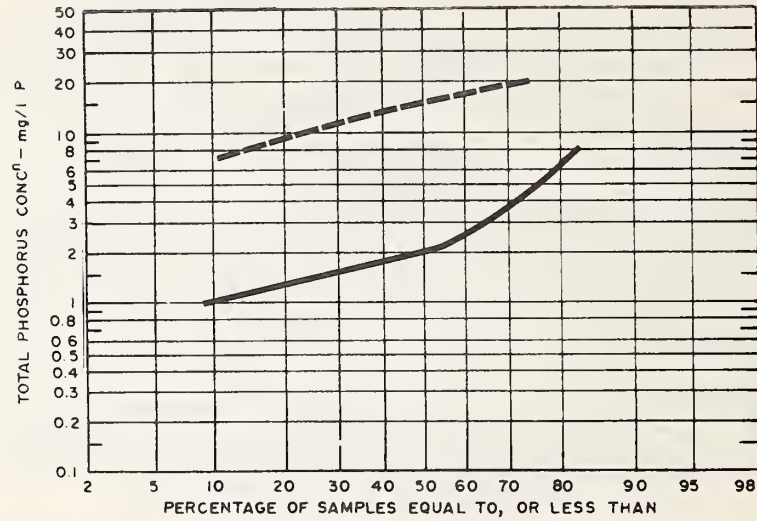
PLANT INFLUENT - - - - -

PLANT EFFLUENT —————

SUSPENDED SOLIDS



PHOSPHORUS

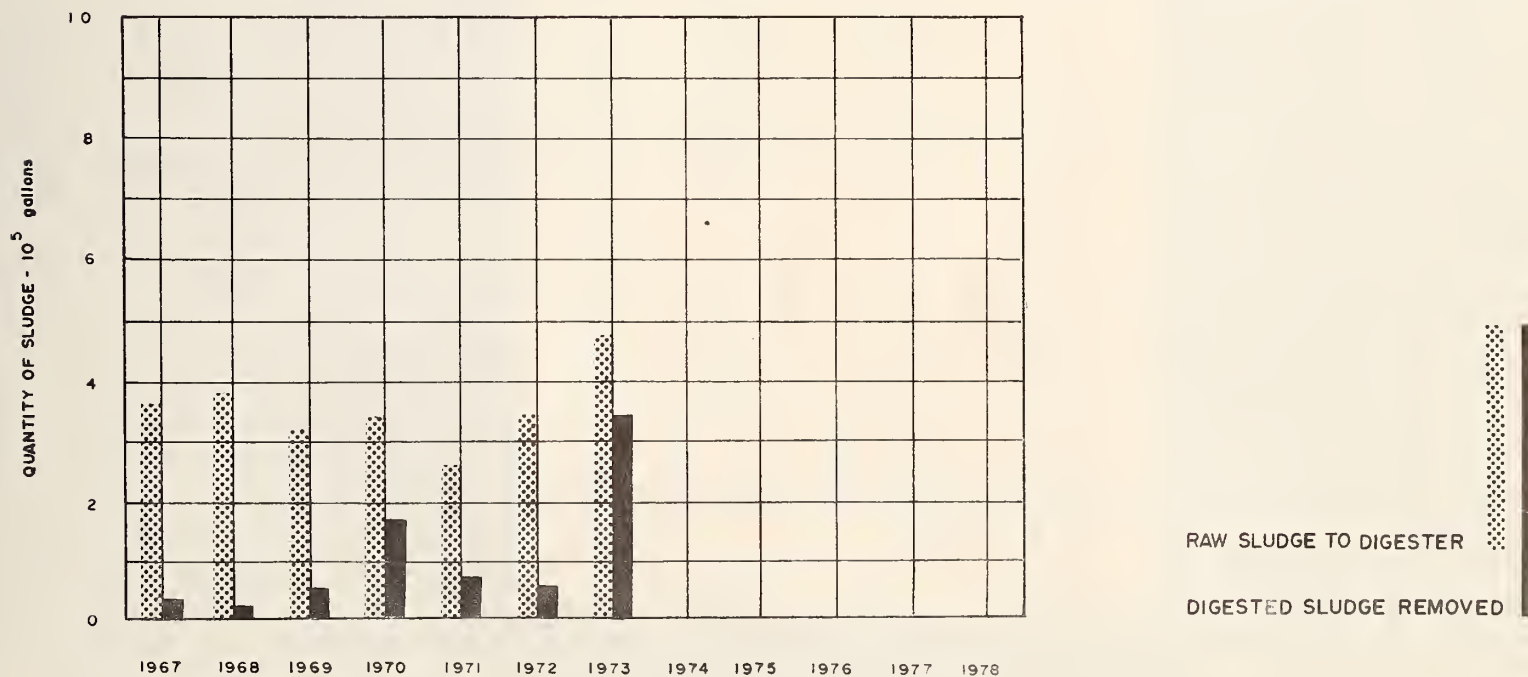
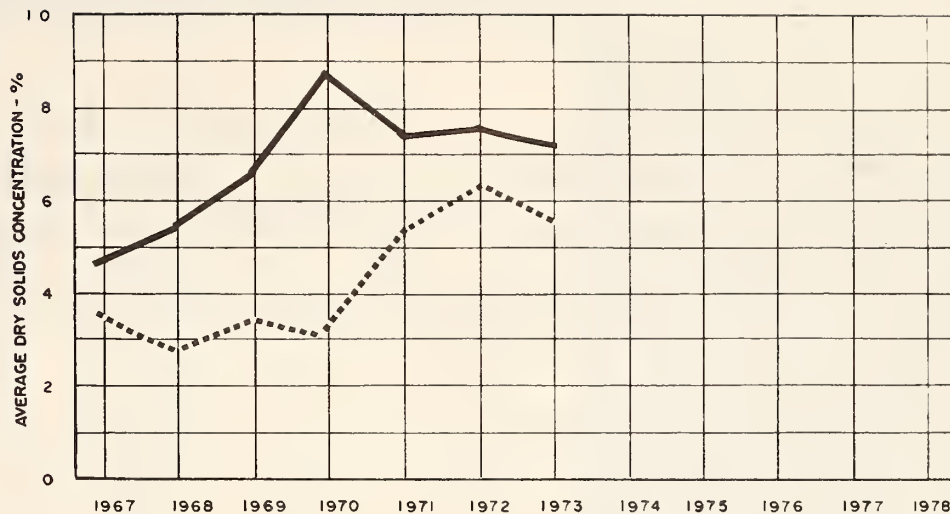


PLANT INFLUENT

PLANT EFFLUENT

DIGESTION

RAW SLUDGE
DIGESTED SLUDGE ———



RAW SLUDGE TO DIGESTER

DIGESTED SLUDGE REMOVED

TREATMENT DATA

MONTH	GRIT QUANTITY REMOVED cubic feet	CHLORINATION		SLUDGE DIGESTION and DISPOSAL							
		CHLORINE USED pounds	AVERAGE DOSAGE mg/l	RAW SLUDGE			DIGESTED SLUDGE			SUPERNATANT	SLUDGE HAULED cubic yards
				QUANTITY 10 ³ gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	QUANTITY REMOVED 10 ³ gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	TOTAL SOLIDS %	
JAN	22	753	11.4	33.5	8.4	66	12.0	10.9	68		72
FEB	40	762	13.4	34.0	6.7	70	12.0	11.4	67		72
MAR	68	684	8.6	38.8	6.4	66	16.5	8.0	64		99
APR	51	637	8.7	39.9	6.4	64	19.5	5.2	63		117
MAY	51	599	8.7	51.6	4.3	63	33.4	3.8	57		198
JUNE	49	563	7.9	61.5	5.1	50	37.9	4.3	61		225
JULY	36	631	8.3	38.9	5.1	65	34.9	5.9	55		207
AUG	47	679	8.9	40.1			41.4				246
SEPT	30	707	10.2	38.7	4.7	49	37.0	5.0	64		220
OCT	38	703	10.9	38.9	3.4	59	43.7	8.0	44		260
NOV	28	742	10.9	36.6	5.2	44	36.9	8.4	42		220
DEC	54	729	9.8	36.8			13.5				80
TOTAL	511	8189	—	489.3	—	—	338.7	—	—	—	2016
AVG.	6.1 cubic feet/mil gal	682	9.7	40.8	5.6	60	28.2	7.1	58		

LAB

